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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/679,771

10/06/2003

Byung-Woong Han

21C-0067

8547

7590

11/01/2005

CANTOR COLBURN LLP
55 Griffin Road South
Bloomfield, CT 06002

EXAMINER

KIM, RICHARD H

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/679,771

Applicant(s)

HAN ET AL.

Examiner

Richard H. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 8,9,12,13,15 and 22-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,10,11,14 and 16-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Naito (US 6,075,649).

Referring to claims 1 and 18, Naito discloses a device comprising a lamp assembly (26) for generating light; a diffusion plate (24) for diffusing the light; a LCD panel assembly (30) for displaying images using the light from the prism sheet and image data externally provided; a prism sheet for adjusting paths of light externally provided, comprising a light incident surface for receiving light; and a light emission surface for emitting light incident on the light incident surface, wherein the light emission surface includes at least two inclined surfaces on which the light is incident and refracted, and a peak angle between the two inclined surfaces is obtuse (col. 4, lines 11-15). As to the product-by-process limitation “determined in association with a refraction index of the prism sheet” it has been recognized that “[E]ven though product-by-process claims are limited by and defined by the process, determinability of patentability is based on the product by itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a

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product of the prior art, the claim is unpatentable even though the prior art product was made by a different process “ *In re Thorpe*, 227 USPQ 964,966 (Fed. Cir. 1985). See also MPEP 2113.

Referring to claim 2, Naito discloses a device wherein the light emission surface includes a plurality of the light concentration units each having the at least two inclined surfaces and the peak angle (col. 4, lines 11-15).

Referring to claims 3 and 19, Naito further discloses a device wherein the light concentration units each have a shape of a prism column and are arranged parallel with each other in a longitudinal direction of the light concentration units (Fig. 1).

Referring to claim 4, Naito discloses a device wherein one of the two inclined surfaces forms a first angle with respect to the light incident surface and the other of the two inclined surfaces forms a second angle with respect to the light incident surface, the first and second angles are equal to each other (Fig. 2).

Referring to claim 5, Naito discloses a device wherein the peak angles between the two inclined surfaces is in a range from about 90° to about 140° (col. 4, lines 11-15).

3. Claims 6, 7, 10, 11, 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naito in view of Yamaguchi (US 6,876,408 B2).

Referring to claims 6, 7 and 20, Naito discloses the device previously recited. Naito further discloses that the peak angle is in a range from about 90° to 140° (col. 4, lines 11-15). However, the reference does not disclose that the refraction index is in a range from about 1.41 to 1.49.

Yamaguchi discloses a device wherein the refractive index is in a range from about 1.41 to 1.49 (col. 13, lines 30-36)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a device wherein the refractive index is in a range from about 1.41 to 1.49 since one would be motivated to produce an image of high contrast over a wide range of viewing angles (col. 2, lines 23-24).

Referring to claims 10 and 11, Naito and Yamaguchi discloses the device previously recited, but fails to disclose that the light emission angle is in a range from about 5.86° to about 26.23° , and that the inclined surfaces are configured such that light incident one of the inclined surfaces travels in accordance with the claimed equations 1 to 3.

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the light emission angle to be in a range from about 5.86° to about 26.23° , and that the inclined surfaces are configured such that light incident one of the inclined surfaces travels in accordance with the claimed equations 1 to 3 since because Naito and Yamaguchi disclose the claimed structural limitations of the device, having the light behave in accordance with structural limitations of the device would naturally occur and is therefore obvious.

Referring to claim 16, Naito discloses that the prism sheet is made of polycarbonate (col. 3, lines 39-41).

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Naito and Yamaguchi in view of Stevenson (US 6,846,089 B2).

Naito and Yamaguchi disclose the device previously recited, but fails to disclose that the body is integrally formed with the light incident surface and the light emission surface.

Kojima et al. discloses a device wherein the body is integrally formed with the light incident surface and the light emission surface (218).

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the body to be integrally formed with the light incident surface and the light emission surface since one would be motivated to reduce the number of separate parts needed for the display.

5. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Naito and Yamaguchi in view of Kojima et al. (US 5,797,668).

Naito and Yamaguchi disclose the device previously recited, but fails to disclose that that the refraction index varies in proportion to a value of the peak angle.

Kojima et al. discloses a device wherein the refraction index varies in proportion to a value of the peak angle (abstract).

It would have been obvious to one having ordinary skill in the art for the refraction index to vary in proportion to a value of the peak angle since one would be motivated to increase the head-on luminance (abstract).

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Naito and Yamaguchi in view of Moon et al. (US 2003/086255 A1).

Naito and Yamaguchi disclose the device previously recited, but fails to disclose that the lamp assembly has a plurality of lamps arranged in parallel with each other in a selected direction, the lamps being disposed at a side of the diffusion plate opposite to a side at which the prism sheet is disposed.

Moon et al. discloses a device comprising a plurality of lamps arranged in parallel with each other in a selected direction, the lamps being disposed at a side of the diffusion plate opposite to a side at which the prism sheet is disposed (Fig. 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a plurality of lamps arranged in parallel with each other in a selected direction, the lamps being disposed at a side of the diffusion plate opposite to a side at which the prism sheet is disposed since one would be motivated to improve light efficiency (paragraph 15).

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Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard H. Kim whose telephone number is (571)272-2294. The examiner can normally be reached on 9:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard H Kim
Examiner
Art Unit 2871

RHK


ANDREW SCHECHTER
PRIMARY EXAMINER